WHAT IS CLAIMED IS:

1. A printing control apparatus for controlling a printing device controlled by a plurality of items of control
5   information, comprising:

input means for inputting desired settings as a part of the plurality of items of the control information;

storage means for storing predetermined settings of the items beforehand, in which correlation between the items of
10   the control information are established in advance;

selection means for selecting settings of the items which are correlated with the items inputted by said input means from the predetermined settings stored by said storage means; and

15   transmission means for transmitting the settings of the items, selected by said selection means, to the printing device as control information.

2. The apparatus according to claim 1, wherein said selection
20   means selects the settings of the items which include same setting of an item of the control information inputted by said input means from said storage means.

3. The apparatus according to claim 2, wherein the settings
25   stored by said storage means include a settable item capable to being set by said input means and a non-settable item

incapable to being set, between which correlation is established.

4. The apparatus according to claim 3, wherein said selection means selects settings of the non-settable items correlated with settable items which are agreed with items input by said input means.

5. The apparatus according to claim 1, further comprising default value storage means for storing predetermined setting as a control information, wherein said input means inputs values for changing the predetermined settings stored by said default value storage means, and said selection means selects the settings of the items which are changed by said input means from said storage means.

6. The apparatus according to claim 5, further comprising display means for displaying the items which are stored by said default value storage means.

7. The apparatus according to claims 1, further comprising display means for displaying the items which are inputted by said input means.

8. The apparatus according to claim 1, wherein said display means displays items of the control information in menu formation in which the items are listed.

5  9. The apparatus according to claim 8, wherein said display means displays the items input by said input means in emphasized fashion.

10. The apparatus according to claims 1, further comprising
10  determination means for determining to transmit whether items input by said input means or items stored by said default value storage means.

11. The apparatus according to claims 1, wherein said input
15  means includes type of paper as a settable item.

12. The apparatus according to claims 1, wherein said input means includes paper size as a settable item.

20  13. The apparatus according to claims 1, wherein said input means includes printing color as a settable item.

14. The apparatus according to claims 1, wherein said input means includes printing quality as a non-settable item.

25

15. The apparatus according to claims 1, wherein said input means includes absence or presence of smoothing as a non-settable item.

5  16. The apparatus according to claims 1, wherein said input means includes dither method as a settable item.

17. The apparatus according to claims 1, wherein said input means includes entered processing as a settable item.

10

18. The apparatus according to claims 1, wherein said input means includes various message information, which is necessary when a user performs printing, as a settable item.

15  19. The apparatus according to claims 1, wherein said input means includes cartridge type as a settable item.

20. A printing control apparatus for controlling a printing device by sending control information, which includes a
20  plurality of items, to the printing device, said apparatus comprising:

setting means for entering a value of an item of the control information;

setting acquisition means for acquiring setting status
25  from the printing device;

comparison means for comparing the item set by said

setting means and setting status acquired by said setting

acquisition means; and

display means which, when the result of the comparison

5　by said comparison means is that the value of the set item

and the acquired setting status differ, is for displaying

this fact.


21. The apparatus according to claim 20, further comprising

10　selecting means for allowing an operator to select whether

printing processing is to be continued in dependence upon

the display presented by said display means.


22. The apparatus according to claim 21, wherein in a case

15　where the operator has selected continuation of printing

processing by said selecting means, printing processing is

continued, upon setting the status acquired by said setting

acquisition means, with regard to each item for which a

difference is found as the result of comparison by said

20　comparison means.


23. A printing control apparatus for controlling a printing

device by sending control information, which includes a

plurality of items, to the printing device, said apparatus

25　comprising:

setting means for setting a value of an item of the control information;

setting acquisition means for acquiring setting status from the printing device;

5 comparison means for comparing the item set by said setting means and setting status acquired by said setting acquisition means; and

re-setting means which, when the result of the comparison by said comparison means is that the value of the

10 set item and the acquired setting status differ, is for setting the status, which has been acquired by said setting acquisition means, with regard to each item for which a difference is found.

15 24. A printing control apparatus connected to a plurality of printing devices for controlling one of these printing devices by sending this printing device control information that includes a plurality of items, said apparatus comprising:

20 setting means for setting a value of an item of the control information;

setting acquisition means for acquiring setting status from the printing device;

comparison means for comparing the item set by said

25 setting means and setting status acquired by said setting acquisition means; and

re-setting means which, when the result of the
comparison by said comparison means is that the value of the
set item and the acquired setting status differ, is for
shifting control to a different printing device.

5

25. A printing control method for controlling a printing
device by using stored predetermined settings of a plurality
of items of control information in which correlation between
the items of the control information are established in
10    advance, comprising:
         inputting step of inputting desired settings as a part
of the plurality of items of the control information;
         selecting step of selecting settings of the items which
are correlated with the items inputted in said inputting step
15    from the predetermined settings; and
         transmitting step for transmitting the settings of the
items, selected in said selecting step, to the printing
device as control information.


20    26. The method according to claim 24, wherein said selecting
step selects the settings of the items which include same
setting of an item of the control information inputted in
said inputting step from the predetermined settings.


25    27. The method according to claim 26, wherein the
predetermined settings include a settable item capable to

being set in said inputting step and a non-settable item
incapable to being set, between which correlation is
established.

5    28. The method according to claim 27, wherein said selecting
step selects settings of the non-settable items correlated
with settable items which are agreed with items input in said
inputting step.

10   29. The method according to claim 25, wherein said inputting
step inputs values for changing default settings of the
control information stored by default value storage means,
and said selecting step selects the settings of the items
which are changed in said inputting step from the
15   predetermined settings.

30. The method according to claim 29, further comprising
displaying step of displaying the items which are stored by
the default value storage means.
20

31. The method according to claims 25, further comprising
displaying step of displaying the items which are input in
said inputting step.

32. The method according to claim 31, wherein said displaying step displays items of the control information in menu formation in which the items are listed.

5   33. The method according to claim 32, wherein said displaying step displays the items input in said inputting step in emphasized fashion.

34. The method according to claims 25, further comprising
10  determining step of determining to transmit whether items input in said inputting step or items stored by the default value storage means.

35. The method according to claims 25, wherein said inputting
15  step includes type of paper as a settable item.

36. The method according to claims 25, wherein said inputting step includes paper size as a settable item.

20  37. The method according to claims 25, wherein said inputting step includes printing color as a settable item.

38. The method according to claims 25, wherein said inputting step includes printing quality as a non-settable item.
25

39. The method according to claims 25, wherein said inputting step includes absence or presence of smoothing as a non-settable item.

5    40. The method according to claims 25, wherein said inputting step includes dither method as a settable item.

41. The method according to claims 25, wherein said inputting step includes entered processing as a settable item.

10

42. The method according to claims 25, wherein said inputting step includes various message information, which is necessary when a user performs printing, as a settable item.

15    43. The method according to claims 25, wherein said inputting step includes cartridge type as a settable item.

44.   A printing control method for controlling a printing device by sending control information, which includes a
20    plurality of items, to the printing device, said method comprising:

    setting step of entering a value of an item of the control information;

    setting acquiring step of acquiring setting status from
25    the printing device;

comparing step of comparing the item set in said setting
step and setting status acquired in said setting acquiring
step; and

displaying step which, when the result of the
5   comparison in said comparing step is that the value of the
set item and the acquired setting status differ, is for
displaying this fact.

45.   The method according to claim 44, further comprising
10   selecting step for allowing an operator to select whether
printing processing is to be continued in dependence upon
the display presented in said displaying step.

46.   The method according to claim 45, wherein in a case where
15   the operator has selected continuation of printing
processing in said selecting step, printing processing is
continued, upon setting the status acquired in said setting
acquiring step, with regard to each item for which a
difference is found as the result of comparison in said
20   comparing step.

47.   A printing control method for controlling a printing
device by sending control information, which includes a
plurality of items, to the printing device, said method
25   comprising:

setting step of setting a value of an item of the control

information;

setting acquiring step of acquiring setting status from

the printing device;

5       comparing step of comparing the item set in said setting

step and setting status acquired in said setting acquiring

step; and

re-setting step which, when the result of the

comparison in said comparing step is that the value of the

10      set item and the acquired setting status differ, is for

setting the status, which has been acquired in said setting

acquiring step, with regard to each item for which a

difference is found.


15      48.   A printing control method for controlling one of a

plurality of printing devices by sending this printing device

control information that includes a plurality of items, said

method comprising:

setting step of setting a value of an item of the control

20      information;

setting acquiring step of acquiring setting status from

the printing device;

comparing step of comparing the item set by said setting

means and setting status acquired by said setting acquisition

25      means; and

re-setting step which, when the result of the comparison in said comparing step is that the value of the set item and the acquired setting status differ, is for shifting control to a different printing device.

5

49. A computer readable memory for storing a program for performing control in a printing control device by sending control information, which includes a plurality of items, to the printing device, comprising:

10      a code of an inputting step of inputting desired settings as a part of the plurality of items of the control information;

a code of a predetermined settings of a plurality of items of control information in which correlation between
15  the items of the control information are established in advance;

a code of a selecting step of selecting settings of the items which are correlated with the items inputted in said inputting step from the predetermined settings; and

20      a code of a transmitting step for transmitting the settings of the items, selected in said selecting step, to the printing device as control information.

50.  A computer readable memory for storing a program for
25  controlling a printing device by sending control

information, which includes a plurality of items, to the printing device, comprising:

a code of an input step of entering a value of each item of the control information;

5      a code of a readout step of reading out link information from link information storage means, wherein in a case where control information has been entered at said input step, an item to be changed in dependence upon the value of an item and the value of this item are stored beforehand as the link

10     information with regard to predetermined items of the control information;

a code of a setting step of setting a value of a relevant item based upon items and values contained in the link information read out at said readout step; and

15     a code of a latest-value storage step of storing the latest value of the control information set at said input step or at said setting step.


51.    A computer readable memory for storing a program for

20     controlling a printing device by sending control information, which includes a plurality of items, to the printing device, comprising:

a code of a setting step of entering a value of an item of the control information;

25     a code of a setting acquisition step of acquiring setting status from the printing device;

a code of a comparison step of comparing an item set at said setting step and setting status acquired at said setting acquisition state; and

a code of a display step which, when the result of the comparison at said comparison step is that the value of the set item and the acquired setting status differ, is a step of displaying this fact.

52. A computer readable memory for storing a program for controlling a printing device by sending control information, which includes a plurality of items, to the printing device, comprising:

a code of a setting step of entering a value of an item of the control information;

a code of a setting acquisition step of acquiring setting status from the printing device;

a code of a comparison step of comparing an item set at said setting step and setting status acquired at said setting acquisition state; and

a code of re-setting step which, when the result of the comparison at said comparison step is that the value of the set item and the acquired setting status differ, is for setting the status, which has been acquired at said setting acquisition step, with regard to each item for which a difference is found.

53. A computer readable memory for storing a program for performing control in a printing control apparatus, which is connected to a plurality of printing devices, for controlling one of these printing devices by sending this

5 printing device control information that includes a plurality of items, said method comprising:

a code of a setting step of setting a value of an item of the control information;

a code of a setting acquisition step of acquiring

10 setting status from the printing device;

a code of a comparison step of comparing the item set at said setting step and setting status acquired at said setting acquisition step; and

a code of a re-setting step which, when the result of

15 the comparison at said comparison step is that the value of the set item and the acquired setting status differ, is for shifting control to a different printing device.

54. A printing control apparatus for controlling a printing

20 device in which ink tanks of a plurality of types are capable of being installed in interchangeable fashion, said printing device having a counter for each type of ink tank for measuring amount of remaining ink in the tank, said apparatus comprising:

first sensing means for sensing that an ink tank has
been installed in said printing device to replace another
ink tank;

second sensing means for sensing the type of ink tank
5   that has been installed as a replacement; and

resetting means for resetting the counter of said
printing device in dependence upon the type of the ink tank
sensed by said second sensing means.


10   55. The apparatus according to claim 51, further comprising:

judging means which, when said first sensing means has
sensed that an ink tank has been replaced, is for judging
whether the ink tank before the replacement and the ink tank
after the replacement are of the same type; and

15   selecting means for allowing an operator to select
whether resetting of the counter is to be performed in a case
where the types of the ink tanks before and after the
replacement are the same;

the counter being reset by said resetting means in a
20   case where reset has been selected by said selecting means;

the counter not being reset in a case where said judging
means judges that the types of the ink tanks before and after
the replacement are not the same or in a case where reset
has not been selected by said selecting means.

25

56. A printing control method for controlling a printing device in which ink tanks of a plurality of types are capable of being installed in interchangeable fashion, said printing device having a counter for each type of ink tank for measuring amount of remaining ink in the tank, said apparatus comprising:

a first sensing step of sensing that an ink tank has been installed in said printing device to replace another ink tank;

a second sensing step of sensing the type of ink tank that has been installed as the replacement; and

a resetting step of resetting the counter of said printing device in dependence upon the type of the ink tank sensed at said second sensing step.

57. The method according to claim 51, further comprising:

a judging step which, when it has been sensed at said first sensing step that an ink tank has been replaced, is a step of judging whether the ink tank before the replacement and the ink tank after the replacement are of the same type; and

a selecting step of allowing an operator to select whether resetting of the counter is to be performed in a case where the types of the ink tanks before and after the replacement are the same;

the counter being reset at said resetting step in a case where reset has been selected at said selecting step;

the counter not being reset in a case where it is judged at said judging step that the types of the ink tanks before and after the replacement are not the same or in a case where reset has not been selected at said selecting step.

5  58.  A computer readable memory for storing a program for controlling a memory device in which ink tanks of a plurality of types are capable of being installed in interchangeable fashion, said printing device having a counter for each type of ink tank for measuring amount of remaining ink in the tank, 10  said apparatus comprising:

a code of a first sensing step of sensing that an ink tank has been installed in said printing device to replace another ink tank;

a code of a second sensing step of sensing the type of 15  ink tank that has been installed as the replacement; and

a code of a resetting step of resetting the counter of said printing device in dependence upon the type of the ink tank sensed at said second sensing step.